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| 10/562,032 | 12/22/2005 | William M. Shvodian | XSI.089US/10X-254US | 5465 |

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| EXAMINER | |
|---|---|
| POGMORE, TRAVIS D | |
| ART UNIT | PAPER NUMBER |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/562,032 | SHVODIAN ET AL. | |
| | Examiner | Art Unit | |
| | TRAVIS POGMORE | 4148 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *December 22, 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

# DETAILED ACTION

1. The instant application having Application No. 10/562032 filed on December 22, 2005 is presented for examination by the examiner.

## *Oath/Declaration*

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

## *Priority*

3. As required by M.P.E.P. 201.14(c), acknowledgement is made of applicant's claim for priority based on applications filed on July 1, 2003 (US Provisional Application No. 60/483629).

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

## *Drawings*

5. The applicant's drawings submitted are acceptable for examination purposes.

## *Claim Objections*

6. Claim 22 is objected to because of the following informalities: Line 7 ends with a period in the middle of the claim. Periods may not be used in the claims except for abbreviations and at the end of each claim. Appropriate correction is required.

## *Claim Rejections – 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 7, 9-14, 16, and 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by WIPO Publication WO 02/09331 A2 (hereinafter "Lockridge et al.").

As to claim 1, Lockridge et al. teaches a method of time stamping data in a local wireless device (page 16, lines 29-31, 802.11b is an example of a local wireless network and thus Lockridge teaches a local wireless device), comprising:

sequentially detecting a plurality of global synchronizing events (page 5, lines 13-28, a System Clock Recovery signal sent out by the head end is a global synchronizing event as its timing information is propagated throughout the system and since the input may be in transport packets (plural) it must necessarily come in a sequence of some sort and in order for the server to frequency lock its own local system clock to the head end system it must necessarily be able to detect the global synchronizing events);

receiving host data from a local host circuit (Fig. 4 as briefly described on page 12, lines 8-15);

forming the host data into data packets, each of the data packets including time stamp information, the time stamp information indicating when a selected one of the data packets should be processed by a remote receiver relative to other of the data

packets (page 5, lines 19-32, since the server is frequency locked to the head end system time stamp T1 is a time stamp which ensures that any client device may reproduce the arrival time, even if the global synchronizing event itself is not forwarded to it);

transmitting the data packets over a wireless channel to a remote wireless device, wherein the time stamp information is identified relative to one of the plurality of global synchronizing events (page 5, lines 23-32, the server may be frequency-locked to the head end system clock and thus the time stamp T1 is relative to the global synchronizing event).

As to claim 2, Lockridge et al. teaches wherein the global synchronizing events are one of: a plurality of network beacons sent over a wireless channel by a network coordinator, a plurality of network beacons generated by the local wireless device, a plurality of global positioning system signals sent over a wireless channel, a plurality of synchronization packets sent over a wireless channel by a remote network device, a plurality of synchronization packets generated by the local wireless device, and a plurality of synchronization signals sent over a wired channel (page 5, lines 12-18, a System Clock Recovery could be a network beacon, a synchronization packet or a synchronization signal, and sent by wired or wireless channels).

As to claim 3, Lockridge et al. teaches wherein the data packets include two or more levels of encapsulation (page 7, lines 13-16, TCP or UDP is one level of encapsulation and IP is a second level).

As to claim 4, Lockridge et al. teaches wherein the time stamp information includes first and second time stamp markers, the first time stamp marker being in a first of the two or more levels of encapsulation, and the second time stamp marker being in a second of the two or more levels of encapsulation (page 7, lines 21-22 and page 8, lines 12-13, time stamp T1 is placed in the UDP payload making the application layer the first level of encapsulation and T2 is placed outside of the UDP data making the transport layer the second level of encapsulation).

As to claim 5, Lockridge et al. teaches wherein the first time stamp marker comprises a first free-running timer value corresponding to the host data, and wherein the second time stamp marker comprises a global synchronizing event identifier and a second free-running timer value corresponding to the global synchronizing event (page 5, line 32 through page 6, line 7, the local system clock of the server used for time stamp T2 being the first free-running timer and time stamp T1 being from the same free-running timer but as the server is frequency-locked via the SCR from the head end system clock (as it is added before any additional processing is done) being the second time stamp).

As to claim 7, Lockridge et al. teaches wherein the method is embodied in an integrated circuit (page 12, lines 11-15, and Figure 4, element 404 and Figure 9).

As to claim 9, Lockridge et al. teaches wherein the host data comprises one of: MPEG cells, encapsulated MPEG cells, Ethernet packets, internet protocol packets, and PCM audio samples (page 7, lines 12-16, disclosed are Ethernet packets and internet protocol packets comprising multi-media content in general).

As to claim 10, Lockridge et al. teaches a method of coordinating data in a wireless receiver (page 16, lines 29-31), comprising:

sequentially detecting a plurality of global synchronizing events (page 5, lines 13-32, the SCR timing is maintained throughout the system);

receiving a data packet from a remote device over a wireless channel (Fig. 2, element 203);

extracting time stamp information from the data packet, the time stamp information indicating when the received data packet should be processed by the wireless receiver relative to other data packets (page 13, lines 21-23, the clock recovery algorithm teaches the relative processing of the packets based on their respective timestamps);

extracting host data from the data packet (page 13, lines 16-18); and

passing the host data to a local host in response to the time stamp information, wherein the time stamp information is identified relative to one of the plurality of global synchronizing events (page 13, lines 21-23 and page 5, lines 23-32).

As to claim 11, Lockridge et al. teaches wherein the global synchronizing events are one of: a plurality of network beacons sent over a wireless channel by a network coordinator, a plurality of network beacons generated by the local wireless device, a plurality of global positioning system signals sent over a wireless channel, a plurality of synchronization packets sent over a wireless channel by a remote network device, a plurality of synchronization packets generated by the local wireless device, and a plurality of synchronization signals sent over a wired channel (page 5, lines 12-18, a System Clock Recovery could be a network beacon, a synchronization packet or a synchronization signal, and sent by wired or wireless channels).

As to claim 12, Lockridge et al. teaches wherein the data packets include two or more levels of encapsulation (page 7, lines 12-16, disclosed are Ethernet packets and internet protocol packets comprising multi-media content in general).

As to claim 13, Lockridge et al. teaches wherein the time stamp information includes first and second time stamp markers, the first time stamp marker being in a first of the two or more levels of encapsulation, and the second time stamp marker being in

a second of the two or more levels of encapsulation (page 7, lines 21-22 and page 8, lines 12-13).

As to claim 14, Lockridge et al. teaches wherein the first time stamp marker comprises a first free-running timer value corresponding to the host data, and wherein the second time stamp marker comprises a global synchronizing event identifier and a second free-running timer value corresponding to the global synchronizing event. (page 5, line 32 through page 6, line 2 and page 6, lines 5-7).

As to claim 16, Lockridge et al. teaches wherein the method is embodied in an integrated circuit (page 12, lines 11-15).

As to claim 18, Lockridge et al. teaches wherein the host data comprises one of: MPEG cells, encapsulated MPEG cells, Ethernet packets, internet protocol packets, and PCM audio samples (page 7, lines 12-16).

As to claim 19, Lockridge et al. teaches a device for transmitting host data (Fig. 2, reference 202), comprising:

a free-running timer for providing a series of increasing free-running timing values (Fig. 2, reference T1);

a host interface circuit for receiving host data from a local host circuit and a first free- running timing value from the series of increasing free-running timing values, and

for placing the host data and the first free-running timing value into a host interface packet (page 5, line 29 – page 6, line 2, the data packet must be on a local host circuit once it is received and then it is stamped and broadcast together with T1 (which is a local system clock, by definition a free-running timer));

a detection circuit for detecting a global synchronizing event (page 5, lines 13-28, a System Clock Recovery signal sent out by the head end is a global synchronizing event as its timing information is propagated throughout the system and since the input may be in transport packets (plural) it must necessarily come in a sequence of some sort and in order for the server to frequency lock its own local system clock to the head end system it must necessarily be able to detect the global synchronizing events) and receiving a second free-running timing value from the series of increasing free-running timing values (page 6, lines 5-7, the same local system clock as was used for time stamp T1 is sampled again to generate T2); and

a wireless transceiver for adding the second free-running timing value and an identifier for the global synchronizing event to the host interface packet to form an air link frame, and transmitting the air link frame over a wireless channel to a remote wireless device (page 6, lines 7-14 in light of page 16, lines 29-31, the data frame includes the first time stamp T1 which is offset from the global synchronizing event and the second time stamp T2 and is received by the client device, and since 802.11b is an example of a local wireless network Lockridge teaches a local wireless device which by necessity has a transceiver capable of transmitting the data frame as an air link frame).

As to claim 20, Lockridge et al. teaches further comprising a first-in-first-out buffer located between the host interface circuit and the wireless transceiver for passing the host interface packet (Fig. 5, element 512 and page 6, lines 1-2, this is a more detailed view of Fig. 4 which is a more detailed view of the server (Fig. 2, element 202); first the data is received by the satellite tuner (Fig. 5, element 502) and then it travels through elements 504 and 506 (comprising the host interface circuit) and continuing on through the rest of Fig. 5 (including the FIFO buffer) before moving on to the Ethernet time stamp board (Fig. 4, element 404) where time stamp T1 is added to the packet before it is broadcast (that being the point at which it must reach the wireless transceiver)).

As to claim 21, Lockridge et al. teaches wherein the global synchronizing event is one of: a network beacon sent over a wireless channel by a network coordinator, a network beacon generated by the wireless transceiver, a global positioning system signal sent over a wireless channel, a synchronization packet sent over a wireless channel by a remote network device, a synchronization packet generated by the wireless transceiver, and a synchronization signal sent over a wired channel (page 5, lines 12-18, a System Clock Recovery could be a network beacon, a synchronization packet or a synchronization signal, and sent by wired or wireless channels).

As to claim 22, Lockridge et al. teaches a receiver device for receiving host data over a wireless channel, comprising:

a free-running timer for providing a series of increasing free-running timing values (page 6, lines 17-19);

a detection circuit for detecting a global synchronizing event and receiving a free-running timing value from the series of increasing free-running timing values (page 5, lines 18-22 and page 6, lines 5-7); and

a wireless transceiver for receiving an air link frame having a host interface packet and a first time stamp, the host interface packet including a second time stamp (page 13, lines 10-15 and Fig.6, element 602, since the network may be wireless as previously established it is inherent in the art that any client in the network must have a wireless transceiver and the packet received by the time stamp board may include both T1 and T2); and

a first time stamp processor for receiving the first time stamp and comparing the first time stamp with a recorded free-running timing value to determine a timer correction value for the receiver device; (page 13, lines 21-26).

a second time stamp processor for receiving the second time stamp and generating a host data process signal based on the second time stamp, the correction value, and a latency value, the latency value indicating an expected maximum latency time for the air link frame over the wireless channel (page 13, lines 21-26, the second time stamp processor is not patentably distinct from the first time stamp processor, Figures 2 and 6 and the disclosure in the instant application by only containing a single time stamp processor); and

a host interface circuit for receiving and processing the host interface frame based on the host data process signal, and providing the host data to a local host circuit (Figure 6 and page 13, lines 13-20).

As to claim 23, Lockridge et al. teaches further comprising a first-in-first-out buffer located between the wireless transceiver and the host interface circuit for passing the host interface packet. (page 6, line 26 through page 7 line 1, in order for the buffer to remove data at the same rate they arrived at the server it must be a FIFO buffer).

As to claim 21, Lockridge et al. teaches wherein the global synchronizing event is one of: a network beacon sent over a wireless channel by a network coordinator, a network beacon generated by the wireless transceiver, a global positioning system signal sent over a wireless channel, a synchronization packet sent over a wireless channel by a remote network device, a synchronization packet generated by the wireless transceiver, and a synchronization signal sent over a wired channel (page 5, lines 12-18, a System Clock Recovery could be a network beacon, a synchronization packet or a synchronization signal, and sent by wired or wireless channels).

## *Claim Rejections – 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockridge et al. in view of WIPO Application Publication Number WO 01/52461 A2 (hereinafter "Tan et al.").

As to claim 6, Lockridge et al. teaches the method of time stamping data as recited in claim 1, but does not specifically teach wherein the time stamp information comprises a global synchronizing event identifier and an offset timing value relating the host data in time with respect to the global synchronizing event.

However, Tan et al. teaches wherein the time stamp information comprises a global synchronizing event identifier and an offset timing value relating the host data in time with respect to the global synchronizing event (page 12, lines 9-14, a beacon transmission is a global synchronizing event and in order to synchronize other devices besides the server with said beacon transmission there must necessarily be an offset provided (e.g. by comparing T2 relative to T1)).

Since the devices disclosed in Tan et al. are mobile in nature unlike those in Lockridge, and the primary purpose of the system disclosed in Tan et al. is synchronization, it is necessary that an offset timing value be used in order to actually provide synchronization.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Lockridge et al. to include the ability to

process the time stamp information comprising a global synchronizing event identifier and an offset timing value as in Tan et al. because it would provide with an improved system wherein mobile devices could be synchronized, not just stationary ones.

As to claim 15, Lockridge et al. teaches the method of coordinating data as recited in claim 10, but does not specifically teach wherein the time stamp information comprises a global synchronizing event identifier and an offset timing value relating the host data in time with respect to the global synchronizing event.

However, Tan et al. teaches wherein the time stamp information comprises a global synchronizing event identifier and an offset timing value relating the host data in time with respect to the global synchronizing event (page 12, lines 9-14, a beacon transmission is a global synchronizing event and in order to synchronize other devices besides the server with said beacon transmission there must necessarily be an offset provided (e.g. by comparing T2 relative to T1)).

Since the devices disclosed in Tan et al. are mobile in nature unlike those in Lockridge, and the primary purpose of the system disclosed in Tan et al. is synchronization, it is necessary that an offset timing value be used in order to actually provide synchronization.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Lockridge et al. to include the ability to process the time stamp information comprising a global synchronizing event identifier

and an offset timing value as in Tan et al. because it would provide with an improved system wherein mobile devices could be synchronized, not just stationary ones.

11. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockridge et al. in view of U.S. Patent No. 5,995,534 (hereinafter "Fullerton").

As to claim 8, Lockridge et al. teaches the method of time stamping data as recited in claim 1, but does not specifically teach wherein the method is embodied in an ultrawide bandwidth transceiver.

However, Fullerton teaches an ultrawide bandwidth communication system and method (column 2, lines 10-28).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Lockridge et al. to include utilizing an ultrawide bandwidth transceiver as in Fullerton because it would provide with an improved system wherein an impulse radio link can communicate many independent channels simultaneously by employing different subcarriers for each channel (Fullerton, Abstract, lines 1-11).

As to claim 15, Lockridge et al. teaches the method of coordinating data as recited in claim 10, but does not specifically teach wherein the method is embodied in an ultrawide bandwidth transceiver.

However, Fullerton teaches an ultrawide bandwidth communication system and method (column 2, lines 10-28).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Lockridge et al. to include utilizing an ultrawide bandwidth transceiver as in Fullerton because it would provide with an improved system wherein an impulse radio link can communicate many independent channels simultaneously by employing different subcarriers for each channel (Fullerton, Abstract, lines 1-11).

## *Conclusion*

12. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See MPEP 707.05(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS POGMORE whose telephone number is (571)270-7313. The examiner can normally be reached on Monday through Thursday between 7:30 a.m. and 5:00 p.m. eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on 571-272-3689. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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